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FERTILIZER REPORT

FOR THE YEAR
1948

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Secretary of Agriculture

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Commonwealth of Pennsylvania
Department of Agriculture
Harrisburg

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Fertilizer Report—1948

Introduction

All products intended for fertilizing purposes, except the dung of domestic animals, marl, lime, and wood ashes, shall be registered annually in accordance with the provisions of the Pennsylvania Fertilizer Law, Act of May 1, 1909, as amended.

Section 1 requires the following information to be shown on sacks or attached cards: (a) The number of pounds of fertilizer contained in the package; (b) the name, brand, or trade mark under which the fertilizer is sold; (c) the name and principal address of the manufacturer, importer, or other person putting the fertilizer on the market in this Commonwealth; (d) guarantee for nitrogen; (e) guarantee for total phosphoric acid, except in mixed or super-phosphate fertilizer; (f) guarantee for available phosphoric acid; (g) guarantee for potash soluble in distilled water.

Mixed fertilizer shall contain at least sixteen units of plant food based upon guarantees for nitrogen, available phosphoric acid, and water soluble potash, the guarantees to be stated in even units.

The Law requires that when the word "tobacco" is used as a part of the brand name, the potash content must be in a form other than chloride.

Applications for registration are submitted to each previous licensee toward the close of the calendar year. The application must show the preceding year's tonnage sales of each brand in order that license or registration fee can be properly computed. It must also show the names and number of brands to be sold during the ensuing year, and state the analysis of each one of such brands.

Agents of the Bureau of Foods and Chemistry are empowered to collect samples of commercial fertilizers, at which time reports providing full information for each sample are prepared. The samples and reports are forwarded direct to the Harrisburg Laboratory where an immediate check of the record is effected to determine the registration status. Analyses are then performed to ascertain whether the fertilizers conform to their guarantees.

During the year 1948, Agents of the Department collected 517 official samples. Of this number, a total of 506, representing 221 brands registered by 36 manufacturers, were subjected to analysis and classified as follows:

	Brands	Samples
Complete Fertilizers	171	408
Superphosphate Fertilizers	25	55
Rock and Potash Fertilizers	21	36
Miscellaneous Fertilizers	4	7
Totals	221	506

Requirements for Registration According to Pennsylvania FERTILIZER LAW

Section 2. Each manufacturer or importer of commercial fertilizer . . . shall, on or before the first day of January of each year, or before offering them for sale in this Commonwealth, file annually with the Secretary of Agriculture a statement of the names and number of brands of such commercial fertilizers, having distinct trade-names, that he shall offer for sale during the next ensuing year, and a copy of the analysis of each one of such brands of commercial fertilizer . . .

Section 3. In addition . . . every manufacturer or importer of commercial fertilizers shall, on or before the first day of January of each year, or before offering them for sale in this Commonwealth, file annually with the Secretary of Agriculture an affidavit showing the amount of each brand of fertilizer, having a distinct trade-name, sold within the Commonwealth during the last preceding year; and if the said amount shall be one hundred and fifty tons or less, he or they shall pay or cause to be paid to the Secretary of Agriculture the sum of fifteen dollars for each and every brand of such commercial fertilizer, having a distinct trade-name, sold within the State during the last preceding year; and if the said amount shall exceed one hundred and fifty tons, and be not more than two hundred and fifty tons, he or they shall pay the sum of twenty dollars, as aforesaid; if the said amount shall exceed two hundred and fifty tons, and not more than four hundred tons, he or they shall pay the sum of thirty dollars; if the amount shall exceed four hundred tons, and not more than five hundred tons, he or they shall pay forty dollars; and if the amount shall exceed five hundred tons, he or they shall pay fifty dollars. If such manufacturer or manufacturers, importer or importers, shall not have made any sales within the Commonwealth during the preceding year, he or they shall pay the sum of fifteen dollars upon each such brand as aforesaid.

Section 5. Any person or persons selling, offering, or exposing for sale, any commercial fertilizer or any brand of the same, having a distinct trade-name, without the analysis required by section one of this act, or with an analysis stating that it contains a larger percentage of any one or more of the above-named constituents than is contained therein, or for the sale of which all the provisions of sections two and three have not been complied with, or any person violating any of the provisions of section four of this act, shall be guilty of a misdemeanor, and, on conviction, shall be sentenced to pay a fine of not less than twenty-five nor more than one hundred dollars for the first offense, and not less than two hundred dollars for each subsequent offense. . . .—*Act of May 1, 1909, P. L. 344 as amended.*

The Department of Agriculture, as the agency charged by the Legislature with enforcement of the provisions of the Fertilizer Law (copies of which are available upon request) insists upon strict compliance therewith.

Brands Registered and Tonnage Sales

Licenses were issued to 107 Manufacturers to cover sales of their brands for the year 1948. These licenses included 615 brands of which 501 were mixed fertilizers and 114 so-called "base" materials such as nitrate of soda, sulphate of ammonia, bone, etc.

The 1948 applications for registration showed that 547,381 tons of all classes of fertilizers were sold during the year 1947 compared with 555,844 tons sold during 1946 and classified as follows: Complete Fertilizers, 454,389 tons; Ground Bone Fertilizers 869 tons; Superphosphate Fertilizers, 64,848 tons; Rock and Potash Fertilizers, 18,327 tons; and Miscellaneous Fertilizers as follows: Tankage, 863 tons; Nitrate of Soda, 333 tons; Potash Salts, 118 tons; Sulphate of Ammonia, 161 tons; and unclassified, 6,807 tons.

The 1947 tonnage figure reveals that there were supplied 24,782 tons of nitrogen, 98,092 tons of available phosphoric acid, and 41,744 tons of water soluble potash, or a total of 164,618 tons of plant food. The amount of plant food is 44,357 tons more than that supplied during the year 1946.

Conclusions

Of the 506 official samples analyzed, 36 or 7.11 per cent were found to be deficient in one or more elements of plant food, to the extent of 0.2 per cent or more. The proportion of deficiencies is higher than that reported for the year 1947.

Considering the plant food elements separately, 9 samples or 1.78 per cent were found to be deficient in nitrogen, 9 or 1.78 per cent deficient in phosphoric acid, and 18 or 3.56 per cent deficient in water soluble potash.

Of the total number of fertilizers analyzed, 408 were complete fertilizers and 35 or 8.58 per cent were found to be deficient: 8 or 1.96 per cent deficient in nitrogen; 9 or 2.18 per cent in available phosphoric acid; 18 or 4.41 per cent in water soluble potash.

Average Analyses and Retail Prices

The average unit values, estimated from the average retail selling prices, were as follows: Nitrogen \$3.89, Available Phosphoric Acid \$1.50, Water Soluble Potash \$1.68.

The average retail selling price for Complete Fertilizers in 1948 was \$46.31 a ton, compared with \$40.49 for 1947.

It is noted that 7.11 per cent of all samples collected during the year 1948 were found to be deficient, which deficiency is higher than the previous year's inspection. In most instances the deficiencies were balanced by overages in other elements. Where the deficiencies were found to be of serious nature, prosecutions were instituted.

Key to Tables

The following tables include the results of analyses of the official samples. Each sample was given a chemist's number and analyzed for the element or elements guaranteed.

The Asterisk (*) indicates those samples found to be deficient to the extent of 0.2 per cent or more.

TABLE I—Deficiencies.

TABLE II—Average Analysis and Retail Prices.

TABLE III—Complete Fertilizer, furnishing Nitrogen, Available Phosphoric Acid and Potash.

TABLE V—Superphosphate and Lime Phosphate Fertilizers furnishing Available Phosphoric Acid.

TABLE VI—Rock and Potash Fertilizers furnishing Available Phosphoric Acid and Potash.

TABLE VII—Miscellaneous Fertilizers.

TABLE I. DEFICIENCIES

CLASS OF FERTILIZERS	SAMPLES	NITROGEN	Number Deficient in AVAILABLE PHOSPHORIC ACID		POTASH
			9	0	
Complete Fertilizers	408	8	9	18	
Superphosphate Fertilizers ..	55	0	0	0	
Rock and Potash Fertilizers ..	36	0	0	0	
Miscellaneous	7	1	0	0	
Total	506	9	9	18	

TABLE II. AVERAGE ANALYSES AND RETAIL PRICES

FORM OF PLANT FOOD	COMPLETE FERTILIZERS	SUPER- PHOSPHATE FERTILIZERS*	ROCK AND POTASH FERTILIZERS	MISCEL- LANEOUS
	Per Cent	Per Cent	Per Cent	Per Cent
Nitrogen	4.42	13.56
Available Phosphoric Acid ..	11.78	20.69	15.11	8.23
Potash	7.03	9.02
Selling Price 1948	\$46.31	\$31.06	\$37.80	\$63.39
Selling Price 1947	\$40.49	\$28.62	\$33.30	\$48.00

* Excluding Lime Phosphate.

TABLE III. ANALYSES OF COMPLETE FERTILIZERS—FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	NITROCEN		AVAILABLE PHOSPHORIC ACID		POTASH		
	Found	Guar.	Found	Cuar.	Found	Cuar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
THE AMERICAN AGRICULTURAL CHEMICAL CO. New York, N. Y.							
AA Quality Fertilizer	2-12-6 (132)	2.19	2.00	12.62	12.00	6.20	6.00
AA Quality Fertilizer	2-12-6 (484)	1.92	2.00	13.26	12.00	5.91	6.00
AA Quality Fertilizer	2-12-6 (497)	2.01	2.00	12.44	12.00	6.12	6.00
AA Quality Fertilizer	3-12-6 (131)	3.01	3.00	12.44	12.00	5.99	6.00
AA Quality Fertilizer	3-12-6 (161)	2.90	3.00	12.60	12.00	6.36	6.00
AA Quality Fertilizer	3-12-6 (407)	3.20	3.00	12.74	12.00	6.37	6.00
AA Quality Fertilizer	4-12-4 (160)	4.01	4.00	12.44	12.00	4.58	4.00
AA Quality Fertilizer	4-12-8 (130)	4.16	4.00	12.60	12.00	8.26	8.00
AA Quality Fertilizer	5-10-5 (409)	5.16	5.00	10.18	10.00	5.74	5.00
Agrico Country Club	6-10-4 (455)	6.19	6.00	10.68	10.00	4.29	4.00
Agrico for Broad Leaf Evergreens	6-10-4 (261)	6.22	6.00	11.06	10.00	4.05	4.00
Agrico for Broad Leaf Evergreens	6-10-4 (454)	6.19	6.00	10.82	10.00	3.80	4.00
Agrico for Commercial Growers	4-12-4 (453)	4.62	4.00	12.44	12.00	4.85	4.00
Agrico for Corn	3-12-6 (11)	3.06	3.00	12.46	12.00	6.75	6.00
Agrico for Corn	3-12-6 (42)	2.80	3.00	13.40	12.00	6.19	6.00
Agrico for Corn	3-12-6 (164)	2.81	3.00	12.10	12.00	6.42	6.00
Agrico for Corn	3-12-6 (256)	3.03	3.00	12.00	12.00	6.21	6.00
Agrico for Corn	3-12-6 (288)	3.11	3.00	14.56	12.00	6.32	6.00
Agrico for Corn	3-12-6 (301)	3.05	3.00	12.86	12.00	6.47	6.00
Agrico for Corn	3-12-6 (343)	3.00	3.00	13.46	12.00	6.15	6.00
Agrico for Corn	3-12-6 (387)	3.37	3.00	13.26	12.00	6.48	6.00
Agrico for Corn	3-12-6 (432)	3.27	3.00	12.68	12.00	5.88	6.00
Agrico for Corn	3-12-6 (451)	3.32	3.00	12.08	12.00	6.46	6.00
Agrico for Corn	4-12-4 (483)	4.24	4.00	12.58	12.00	4.50	4.00
Agrico for Fruit	10-6-1 (461)	*9.63	10.00	7.00	6.00	4.11	4.00
Agrico for Fruit	10-6-1 (487)	10.13	10.00	7.06	6.00	4.15	4.00
Agrico for Gardens	5-10-5 (70)	4.84	5.00	11.76	10.00	5.33	5.00
Agrico for Gardens	5-10-5 (260)	4.82	5.00	10.68	10.00	5.10	5.00
Agrico for Gardens	5-10-5 (402)	5.31	5.00	10.84	10.00	6.24	5.00
Agrico for Gardens	5-10-5 (449)	5.15	5.00	10.24	10.00	5.55	5.00
Agrico for Gardens	5-10-5 (456)	5.23	5.00	10.00	10.00	5.21	5.00
Agrico for Gardens	5-10-5 (485)	5.28	5.00	10.52	10.00	5.35	5.00
Agrico for Gardens	5-10-5 (516)	5.17	5.00	10.00	10.00	5.22	5.00
Agrico for Grain	2-12-6 (10)	1.93	2.00	12.68	12.00	6.43	6.00
Agrico for Grain	2-12-6 (255)	2.10	2.00	11.88	12.00	6.09	6.00
Agrico for Grain	2-12-6 (289)	2.02	2.00	12.74	12.00	6.78	6.00
Agrico for Grain	2-12-6 (430)	2.07	2.00	12.02	12.00	6.50	6.00
Agrico for Grain	2-12-6 (510)	2.04	2.00	13.46	12.00	6.14	6.00
Agrico for Grain	3-12-6 (403)	3.45	3.00	13.04	12.00	6.62	6.00
Agrico for Grain	3-12-6 (459)	3.17	3.00	12.16	12.00	6.41	6.00
Agrico for Grain	3-12-6 (514)	2.81	3.00	12.64	12.00	5.84	6.00
Agrico for Lawns, Trees & Shrubs	6-10-4 (69)	5.82	6.00	10.42	10.00	3.90	4.00
Agrico for Lawns, Trees & Shrubs	6-10-4 (262)	5.82	6.00	10.56	10.00	4.72	4.00
Agrico for Lawns, Trees & Shrubs	6-10-4 (457)	5.81	6.00	10.72	10.00	4.71	4.00
Agrico for Lawns, Trees & Shrubs	6-10-4 (512)	6.07	6.00	10.14	10.00	5.09	4.00
Agrico for Potatoes	4-12-8 (8)	4.00	4.00	12.84	12.00	8.76	8.00
Agrico for Potatoes	4-12-8 (401)	4.07	4.00	12.80	12.00	8.73	8.00
Agrico for Potatoes	4-12-8 (391)	4.35	4.00	12.34	12.00	8.96	8.00
Agrico for Potatoes	4-12-8 (437)	4.14	4.00	12.08	12.00	8.66	8.00
Agrico for Potatoes	4-12-8 (450)	4.47	4.00	12.70	12.00	8.82	8.00
Agrico for Potatoes	4-8-8 (68)	3.83	4.00	8.48	8.00	7.98	8.00
Agrico for Potatoes	4-8-8 (163)	3.82	4.00	8.12	8.00	8.24	8.00
Agrico for Potatoes	4-8-8 (458)	4.01	4.00	8.44	8.00	8.00	8.00
Agrico for Potatoes	4-8-8 (486)	*3.52	4.00	11.24	8.00	*7.06	8.00
Agrico for Potatoes	5-10-10 (7)	4.96	5.00	10.16	10.00	10.97	10.00
Agrico for Potatoes	5-10-10 (188)	4.90	5.00	10.24	10.00	10.28	10.00
Agrico for Potatoes	5-10-10 (263)	5.04	5.00	10.90	10.00	10.33	10.00
Agrico for Potatoes	5-10-10 (386)	5.20	5.00	10.58	10.00	10.49	10.00
Agrico for Potatoes	5-10-10 (433)	5.01	5.00	10.48	10.00	10.31	10.00
Agrico for Top Dressing	7-7-7 (463)	7.10	7.00	7.80	7.00	7.54	7.00
Agrico for Truck	4-12-4 (13)	4.04	4.00	12.18	12.00	4.50	4.00
Agrico for Truck	4-12-4 (242)	4.05	4.00	12.16	12.00	4.56	4.00
Agrico for Truck	4-12-4 (303)	4.01	4.00	12.22	12.00	4.52	4.00
Agrico for Truck	4-12-4 (429)	4.17	4.00	12.62	12.00	4.40	4.00
Agrico for Truck	5-10-5 (67)	4.80	5.00	10.26	10.00	5.11	5.00
Agrico for Truck	5-10-5 (162)	4.84	5.00	10.72	10.00	5.22	5.00
Agrico for Truck	5-10-5 (410)	5.06	5.00	10.86	10.00	5.36	5.00
Agrico for Truck	5-10-5 (452)	5.10	5.00	10.30	10.00	5.16	5.00
Agrico for Truck	5-10-10 (129)	5.05	5.00	10.44	10.00	10.36	10.00
Agrico for Truck	5-10-10 (209)	5.01	5.00	10.36	10.00	10.74	10.00
Agrico for Truck	5-10-10 (511)	4.86	5.00	10.86	10.00	10.35	10.00

* Deficient

TABLE III. ANALYSES OF COMPLETE FERTILIZERS—FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	NITROGEN		AVAILABLE PHOSPHORIC ACID		POTASH		As Muriate P. ct.
	Found	Guar.	Found	Guar.	Found	Guar.	
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	
ARMOUR FERTILIZER WORKS Baltimore, Maryland							
Armour's Big Crop	3-12-6 (1)	3.37	3.00	12.82	12.00	6.56	6.00
Armour's Big Crop	3-12-6 (45)	2.94	3.00	12.98	12.00	7.17	6.00
Armour's Big Crop	3-12-6 (66)	3.26	3.00	12.60	12.00	6.55	6.00
Armour's Big Crop	3-12-6 (180)	3.11	3.00	13.06	12.00	6.07	6.00
Armour's Big Crop	3-12-6 (246)	3.30	3.00	12.84	12.00	6.43	6.00
Armour's Big Crop	3-12-6 (280)	3.14	3.00	12.84	12.00	6.10	6.00
Armour's Big Crop	3-12-6 (347)	3.19	3.00	12.84	12.00	6.30	6.00
Armour's Big Crop	3-12-6 (398)	4.67	3.00	12.40	12.00	6.40	6.00
Armour's Big Crop	3-12-6 (425)	3.32	3.00	12.86	12.00	7.81	6.00
Armour's Big Crop	3-12-6 (490)	3.14	3.00	12.10	12.00	6.47	6.00
Armour's Big Crop	4-12-4 (2)	4.07	4.00	12.76	12.00	4.55	6.00
Armour's Big Crop	4-12-4 (244)	4.07	4.00	12.66	12.00	4.33	4.00
Armour's Big Crop	4-12-4 (355)	4.87	4.00	*11.68	12.00	5.46	4.00
Armour's Big Crop	4-12-4 (428)	4.30	4.00	12.98	12.00	4.82	4.00
Armour's Big Crop	4-12-4 (481)	4.31	4.00	12.84	12.00	4.83	4.00
Armour's Big Crop	4-12-8 (3)	4.08	4.00	12.92	12.00	8.18	8.00
Armour's Big Crop	4-12-8 (4)	3.86	4.00	12.68	12.00	7.80	8.00
Armour's Big Crop	4-12-8 (182)	4.01	4.00	12.30	12.00	8.43	8.00
Armour's Big Crop	4-12-8 (281)	3.86	4.00	13.04	12.00	8.61	8.00
Armour's Big Crop	4-12-8 (400)	4.38	4.00	13.46	12.00	8.35	8.00
Armour's Big Crop	4-12-8 (423)	4.35	4.00	12.94	12.00	9.14	8.00
Armour's Big Crop	4-12-8 (479)	4.54	4.00	12.94	12.00	9.00	8.00
Armour's Big Crop	4-12-12 (181)	4.20	4.00	12.60	12.00	13.13	12.00
Armour's Big Crop	5-10-5 (198)	4.85	5.00	10.54	10.00	5.55	5.00
Armour's Big Crop	5-10-5 (229)	4.90	5.00	10.82	10.00	5.29	5.00
Armour's Big Crop	5-10-5 (368)	4.81	5.00	11.44	10.00	5.33	5.00
Armour's Big Crop	5-10-5 (480)	5.02	5.00	10.64	10.00	5.27	5.00
Armour's Big Crop	5-10-5 (491)	5.19	5.00	11.30	10.00	4.93	5.00
Armour's Big Crop	5-10-10 (43)	4.95	5.00	10.84	10.00	10.50	10.00
Armour's Big Crop	5-10-10 (290)	4.81	5.00	11.60	10.00	*9.64	10.00
Armour's Big Crop	5-10-10 (349)	4.82	5.00	10.98	10.00	10.10	10.00
Armour's Big Crop	5-10-10 (399)	5.01	5.00	11.54	10.00	10.12	10.00
Armour's Big Crop	5-10-10 (427)	5.13	5.00	10.12	10.00	10.64	10.00
Armour's Special Top Dresser	10-6-4 (5)	10.03	10.00	6.60	6.00	4.50	4.00
Armour's Velvetgreen	5-10-5 (65)	5.61	5.00	10.96	10.00	5.58	5.00
BAUGH & SONS CO. Philadelphia, Pa.							
Baugh's	5-10-10 (90)	5.37	5.00	10.68	10.00	10.50	10.00
Baugh's Balanced Plant Food	4-12-4 (71)	4.04	4.00	12.76	12.00	4.51	4.00
Baugh's Balanced Plant Food	4-12-4 (354)	4.51	4.00	12.52	12.00	5.47	4.00
Baugh's Balanced Plant Food	4-12-4 (421)	4.16	4.00	13.20	12.00	4.59	4.00
Baugh's Century Plant Food	4-12-8 (88)	4.06	4.00	12.72	12.00	8.22	8.00
Baugh's Century Plant Food	4-12-8 (205)	4.01	4.00	13.66	12.00	8.48	8.00
Baugh's Double Eagle Phosphate	3-12-6 (91)	3.03	3.00	12.18	12.00	6.07	6.00
Baugh's Double Eagle Phosphate	3-12-6 (148)	3.14	3.00	12.18	12.00	5.95	6.00
Baugh's Premium Plant Food & Soil Builder	3-12-6 (38)	2.91	3.00	13.50	12.00	6.16	6.00
Baugh's Premium Plant Food & Soil Builder	3-12-6 (53)	2.91	3.00	12.00	12.00	6.43	6.00
Baugh's Premium Plant Food & Soil Builder	3-12-6 (73)	3.07	3.00	13.08	12.00	6.26	6.00
Baugh's Premium Plant Food & Soil Builder	3-12-6 (94)	3.36	3.00	12.76	12.00	6.19	6.00
Baugh's Premium Plant Food & Soil Builder	3-12-6 (206)	3.10	3.00	12.92	12.00	6.37	6.00
Baugh's Premium Plant Food & Soil Builder	3-12-6 (243)	3.20	3.00	12.74	12.00	6.59	6.00
Baugh's Premium Plant Food & Soil Builder	3-12-6 (278)	3.03	3.00	13.70	12.00	5.93	6.00
Baugh's Premium Plant Food & Soil Builder	3-12-6 (350)	3.38	3.00	13.24	12.00	6.67	6.00
Baugh's Premium Plant Food & Soil Builder	3-12-6 (360)	3.30	3.00	13.62	12.00	6.99	6.00
Baugh's Premium Plant Food & Soil Builder	4-12-4 (359)	4.16	4.00	13.14	12.00	4.18	4.00
Baugh's Premium Plant Food & Soil Builder	5-10-5 (59)	5.11	5.00	10.26	10.00	5.48	5.00
Baugh's Premium Plant Food & Soil Builder	5-10-5 (93)	4.94	5.00	10.66	10.00	5.13	5.00
Baugh's Premium Plant Food & Soil Builder	5-10-5 (337)	*4.68	5.00	11.90	10.00	5.95	5.00
Baugh's Premium Plant Food & Soil Builder	5-10-5 (420)	5.11	5.00	10.74	10.00	5.28	5.00
Baugh's Premium Plant Food & Soil Builder	5-10-5 (444)	5.23	5.00	11.56	10.00	5.38	5.00
Baugh's Premium Plant Food & Soil Builder	5-10-10 (37)	4.86	5.00	11.42	10.00	10.14	10.00
Baugh's Premium Plant Food & Soil Builder	5-10-10 (92)	4.92	5.00	10.78	10.00	10.18	10.00

* Deficient

TABLE III. ANALYSES OF COMPLETE FERTILIZERS—FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	NITROGEN		AVAILABLE PHOSPHORIC ACID		POTASH		
	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate P. ct.
Baugh's Premium Plant Food & Soil Builder 5-10-10 (339)	5.07	5.00	11.18	10.00	10.17	10.00	----
Baugh's Premium Plant Food & Soil Builder 5-10-10 (361)	5.33	5.00	10.98	10.00	10.68	10.00	----
Beugh's Top Dresser 10-6-4 (87)	10.70	10.00	7.52	6.00	4.11	4.00	----
Beugh's Truckers Favorite 5-10-5 (89)	5.03	5.00	10.46	10.00	5.45	5.00	----
Beugh's Truckers Favorite 5-10-5 (442)	5.66	5.00	10.88	10.00	5.38	5.00	----
CARLISLE FERTILIZER WORKS, INC. Carlisle, Pa.							
Carlisle 3-12-6 (212)	3.13	3.00	13.00	12.00	7.80	6.00	----
Carlisle 5-10-10 (213)	4.93	5.00	10.50	10.00	11.55	10.00	----
CENTRAL CHEMICAL CORPORATION Hagerstown, Md.							
Farmrite Farmers Favorite 4-12-4 (75)	4.06	4.00	12.34	12.00	4.16	4.00	----
Farmrite Farmers Favorite 4-12-4 (174)	4.12	4.00	12.00	12.00	4.01	4.00	----
Farmrite Farmers Favorite 4-12-4 (333)	*3.54	4.00	12.01	12.00	6.78	4.00	----
Farmrite Farmers Favorite 4-12-4 (498)	4.24	4.00	12.94	12.00	4.23	4.00	----
Farmrite 4-12-8 (48)	4.08	4.00	13.74	12.00	8.19	8.00	----
Farmrite 4-12-8 (177)	4.02	4.00	12.02	12.00	8.62	8.00	----
Farmrite 4-12-8 (324)	4.02	4.00	13.02	12.00	8.65	8.00	----
Farmrite 5-10-10 (25)	5.25	5.00	10.24	10.00	10.66	10.00	----
Farmrite 5-10-10 (97)	4.88	5.00	10.32	10.00	9.85	10.00	----
Farmrite 5-10-10 (336)	5.01	5.00	10.76	10.00	10.44	10.00	----
Farmrite Golden Grain 3-12-6 (51)	2.90	3.00	13.16	12.00	5.80	6.00	----
Farmrite Golden Grain 3-12-6 (76)	3.01	3.00	12.14	12.00	6.16	6.00	----
Farmrite Golden Grain 3-12-6 (96)	3.33	3.00	12.04	12.00	6.01	6.00	----
Farmrite Golden Grain 3-12-6 (327)	3.02	3.00	12.24	12.00	5.86	6.00	----
Farmrite Golden Grain 3-12-6 (367)	2.83	3.00	12.10	12.00	5.89	6.00	----
Farmrite Golden Grain 3-12-6 (384)	3.35	2.00	12.22	12.00	6.40	6.00	----
Farmrite Golden Grain 3-12-6 (496)	3.16	3.00	12.06	12.00	5.80	6.00	----
Farmrite Famous Corn Food 3-12-6 (22)	2.88	3.00	11.82	12.00	6.07	6.00	----
Farmrite Famous Corn Food 3-12-6 (173)	2.91	3.00	11.80	12.00	7.30	6.00	----
Farmrite Famous Corn Food 3-12-6 (257)	3.09	3.00	12.42	12.00	6.34	6.00	----
Farmrite Famous Corn Food 3-12-6 (331)	3.62	3.00	12.02	12.00	7.08	6.00	----
Farmrite Famous Fruit Food 10-6-4 (24)	*9.22	10.00	7.32	6.00	4.78	4.00	----
Farmrite Famous Fruit Food 10-6-4 (49)	*9.17	10.00	7.12	6.00	3.90	4.00	----
Farmrite Famous Fruit Food 10-6-4 (259)	9.81	10.00	6.44	6.00	4.88	4.00	----
Farmrite Famous Old Fish Brand 3-12-6 (258)	9.83	10.00	6.66	6.00	4.31	4.00	----
Farmrite Famous Old Fish Brand 3-12-6 (383)	3.13	3.00	12.42	12.00	6.19	6.00	----
Farmrite Famous Old Fish Brand 3-12-6 (334)	3.30	3.00	12.12	12.00	6.36	6.00	----
Farmrite Famous Poteto Food 4-12-8 (19)	3.93	4.00	12.08	12.00	8.20	8.00	----
Farmrite Famous Potato Food 4-12-8 (501)	4.17	4.00	12.40	12.00	7.92	8.00	----
Farmrite Famous Potato Food 5-10-10 (95)	4.81	5.00	10.38	10.00	10.10	10.00	----
Farmrite Famous Poteto Food 5-10-10 (178)	4.82	5.00	10.20	10.00	10.47	10.00	----
Farmrite Famous Poteto Food 5-10-10 (326)	4.88	5.00	10.66	10.00	10.17	10.00	----
Farmrite Famous Tomato Plant Food 5-10-10 (385)	5.13	5.00	10.02	10.00	9.98	10.00	----
Farmrite Tobacco Special 3-12-6 (332)	3.03	3.00	12.42	12.00	5.85	6.00	----
Farmrite Tobacco Special 3-9-12 (329)	3.22	3.00	10.06	9.00	*10.08	12.00	----
Farmrite Truck Special 5-10-5 (23)	4.81	5.00	10.32	10.00	5.54	5.00	----
Farmrite Truck Special 5-10-5 (50)	5.01	5.00	11.62	10.00	4.90	5.00	----
Farmrite Truck Special 5-10-5 (74)	4.88	5.00	10.50	10.00	5.62	5.00	----
Farmrite Truck Special 5-10-5 (176)	4.92	5.00	10.00	10.00	6.05	5.00	----
Farmrite Truck Special 5-10-5 (323)	5.24	5.00	*9.50	10.00	5.53	5.00	----
Farmrite Truck Special 5-10-5 (382)	5.11	5.00	9.80	10.00	5.65	5.00	----
Farmrite Truck Special 5-10-5 (499)	5.18	5.00	9.92	10.00	4.83	5.00	----
COOPERATIVE G.L.F. SOIL BUILDING SERVICE, INC. Ithace, New York							
G. L. F. Quality 3-12-6 (322)	3.21	3.00	12.68	12.00	5.80	6.00	----
G. L. F. Quality 3-12-6 (356)	3.45	3.00	12.22	12.00	6.57	6.00	----
G. L. F. Quality 3-12-6 (411)	3.33	3.00	12.78	12.00	6.41	6.00	----
G. L. F. Quality 3-12-6 (440)	3.13	3.00	12.56	12.00	5.90	6.00	----
G. L. F. Quality 4-12-4 (317)	4.07	4.00	13.24	12.00	4.65	4.00	----
G. L. F. Quality 4-12-4 (370)	4.04	4.00	12.56	12.00	4.16	4.00	----

* Deficient

TABLE III. ANALYSES OF COMPLETE FERTILIZERS—FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	NITROGEN		AVAILABLE PHOSPHORIC ACID		POTASH		As Muriate P. ct.
	Found	Guar.	Found	Guar.	Found	Guar.	
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	
G. L. F. Quality	4-12-12 (416)	4.81	4.00	12.72	12.00	12.17	12.00
G. L. F. Quality	4-12-12 (418)	5.29	4.00	*11.66	12.00	14.88	12.00
G. L. F. Quality	5-10-5 (271)	5.18	5.00	10.90	10.00	6.24	5.00
G. L. F. Quality	5-10-5 (319)	4.85	5.00	11.30	10.00	5.47	5.00
G. L. F. Quality	5-10-5 (369)	5.32	5.00	10.70	10.00	5.51	5.00
G. L. F. Quality	5-10-5 (438)	5.13	5.00	10.96	10.00	5.70	5.00
G. L. F. Quality	5-10-10 (344)	5.25	5.00	10.84	10.00	*9.70	10.00
G. L. F. Quality	5-10-10 (372)	5.12	5.00	10.98	10.00	*9.04	10.00
G. L. F. Quality	5-10-10 (417)	5.34	5.00	10.52	10.00	*9.66	10.00
G. L. F. Quality	6-12-6 (345)	6.04	6.00	13.08	12.00	6.02	6.00
G. L. F. Quality	6-12-6 (371)	6.27	6.00	12.74	12.00	6.16	6.00
G. L. F. Quality	6-12-6 (439)	6.11	6.00	13.18	12.00	6.04	6.00
G. L. F. Quality	6-18-6 (318)	6.15	6.00	18.78	18.00	6.81	6.00
G. L. F. Quality	6-18-6 (419)	6.21	6.00	18.34	18.00	6.21	6.00
THE DAVISON CHEMICAL CORPORATION Baltimore, Md.							
Davco Granulated Alfalfa Special with Borax 2-12-12 (274)	2.17	2.00	12.28	12.00	12.66	12.00	---
Davco Granulated 3-12-6 (30)	2.91	3.00	11.82	12.00	6.08	6.00	---
Davco Granulated 3-12-6 (267)	3.13	3.00	12.88	12.00	6.20	6.00	---
Davco Granulated 3-12-6 (272)	3.07	3.00	11.82	12.00	6.16	6.00	---
Davco Granulated 3-12-6 (309)	3.03	3.00	11.88	12.00	6.00	6.00	---
Davco Granulated 3-12-6 (366)	3.12	3.00	12.80	12.00	5.97	6.00	---
Davco Granulated 3-12-6 (467)	3.25	3.00	13.00	12.00	*5.73	6.00	---
Davco Granulated 3-12-6 (503)	3.11	3.00	12.20	12.00	5.80	6.00	---
Davco Granulated 4-12-4 (313)	4.03	4.00	11.86	12.00	3.95	4.00	---
Davco Granulated 4-12-4 (444)	4.18	4.00	11.82	12.00	3.80	4.00	---
Davco Granulated 4-12-4 (494)	4.27	4.00	12.66	12.00	4.00	4.00	---
Davco Granulated 4-12-8 (36)	4.01	4.00	12.74	12.00	*7.10	8.00	---
Davco Granulated 4-12-8 (275)	4.16	4.00	12.40	12.00	*7.40	8.00	---
Davco Granulated 4-12-8 (311)	4.02	4.00	12.08	12.00	*7.38	8.00	---
Davco Granulated 4-12-8 (458)	4.17	4.00	12.02	12.00	*6.75	8.00	---
Davco Granulated 4-16-4 (276)	4.25	4.00	17.20	16.00	4.51	4.00	---
Davco Granulated 4-16-4 (312)	4.00	4.00	16.00	16.00	3.93	4.00	---
Davco Granulated 5-10-5 (364)	5.02	5.00	10.58	10.00	4.80	5.00	---
Davco Granulated 5-10-5 (466)	5.25	5.00	10.70	10.00	4.93	5.00	---
Davco Granulated 5-10-10 (35)	5.24	5.00	10.82	10.00	*9.24	10.00	---
Davco Granulated 5-10-10 (365)	4.86	5.00	10.48	10.00	*9.21	10.00	---
Old Reliable 3-12-6 (266)	3.17	3.00	11.86	12.00	6.73	6.00	---
Old Reliable 4-12-8 (265)	4.02	4.00	12.60	12.00	8.43	8.00	---
EASTERN STATES FARMERS' EXCHANGE INCORPORATED West Springfield, Mass.							
Eastern States 3-12-6 (136)	3.10	3.00	12.28	12.00	5.92	6.00	---
Eastern States 3-12-6 (166)	3.33	3.00	12.18	12.00	6.67	6.00	---
Eastern States 3-12-6 (218)	3.12	3.00	12.14	12.00	6.84	6.00	---
Eastern States 3-12-6 (240)	3.46	3.00	12.76	12.00	6.47	6.00	---
Eastern States 3-12-6 (381)	3.29	3.00	12.70	12.00	6.78	6.00	---
Eastern States 5-10-10 (139)	5.09	5.00	10.14	10.00	10.25	10.00	---
Eastern States 5-10-10 (172)	5.15	5.00	10.46	10.00	10.80	10.00	---
Eastern States 5-15-10 (168)	5.01	5.00	15.02	15.00	11.98	10.00	---
Eastern States 5-15-15 (137)	5.05	5.00	15.38	15.00	14.80	15.00	---
Eastern States 5-15-15 (167)	5.16	5.00	15.10	15.00	15.65	15.00	---
Eastern States 5-20-10 (170)	4.88	5.00	*18.32	20.00	11.28	10.00	---
Eastern States 5-20-10 (215)	5.37	5.00	*19.04	20.00	10.34	10.00	---
Eastern States 5-20-10 (307)	5.08	5.00	20.98	20.00	11.27	10.00	---
Eastern States 5-20-10 (379)	5.66	5.00	*19.62	20.00	9.93	10.00	---
Eastern States 5-20-10 (493)	5.22	5.00	*19.52	20.00	10.26	10.00	---
Eastern States 8-16-16 (138)	7.82	8.00	16.52	16.00	17.24	16.00	---
Eastern States 8-16-16 (308)	7.82	8.00	16.28	16.00	17.55	16.00	---
Eastern States Garden 5-10-5 (241)	2.02	5.00	10.98	10.00	5.58	5.00	---
Eastern States Garden 5-10-5 (380)	5.83	5.00	11.02	10.00	5.86	5.00	---
AMOS EBY & COMPANY Paradise, Pa.							
Eby's 3-12-6 (113)	2.86	3.00	12.18	12.00	6.76	6.00	---
Eby's 4-8-12 (111)	4.00	4.00	8.74	8.00	12.62	12.00	---
Eby's 4-12-4 (108)	3.80	4.00	12.96	12.00	4.96	4.00	---
Eby's 5-10-10 (109)	4.82	5.00	10.94	10.00	9.91	10.00	---
FARMERS' FERTILIZER & FEED COMPANY Westminster, Md.							
Farmer's Favorite 3-12-6 (208)	2.84	3.00	12.54	12.00	5.86	6.00	---
A. D. GRAHAM & COMPANY, INC. Somerset, Pa.							
Beaver Brand 3-12-6 (306)	3.39	3.00	*11.22	12.00	*5.52	6.00	---
Beaver Brand 3-12-6 (508)	3.08	3.00	12.06	12.00	7.18	6.00	---
Beaver Brand 4-12-4 (304)	4.02	4.00	12.48	12.00	5.13	4.00	---
Beaver Brand 5-10-10 (305)	*4.01	5.00	11.18	10.00	10.38	10.00	---
GRIFFITH & BOYD COMPANY Baltimore, Md.							
Griffith & Boyd's Excelsior Guano 4-12-4 (201)	4.00	4.00	12.26	12.00	4.37	4.00	---
Griffith & Boyd's Excelsior Guano 4-12-4 (488)	4.32	4.00	12.72	12.00	4.43	4.00	---

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TABLE III. ANALYSES OF COMPLETE FERTILIZERS—FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	NITROGEN		AVAILABLE PHOSPHORIC ACID		POTASH		
	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
Griffith & Boyd's High Grade Truck Guano 4-12-8 (202)	4.01	4.00	12.96	12.00	8.92	8.00	----
Truck & Potato Special 5-10-5 (489)	5.03	5.00	10.62	10.00	5.81	5.00	----
INDEPENDENT MANUFACTURING COMPANY Philadelphia, Pa.							
Independent's Standard 5-10-10 (101)	4.83	5.00	10.88	10.00	13.19	10.00	----
KOLLER FERTILIZER COMPANY York, Pa.							
Koller's Elk Phosphate 3-12-6 (223)	3.19	3.00	12.64	12.00	6.14	6.00	----
Koller's Phosphate 4-12-4 (492)	3.91	4.00	12.41	12.00	4.44	4.00	----
Koller's Keystone Potato Phosphate 4-12-8 (222)	4.02	4.00	13.16	12.00	8.42	8.00	----
LANCASTER BONE FERTILIZER COMPANY, INC. Quarryville, Pa.							
Conestoga 3-12-6 (115)	3.56	3.00	12.16	12.00	6.68	6.00	----
Conestoga 4-12-4 (118)	3.94	4.00	12.94	12.00	4.59	4.00	----
Conestoga 4-12-8 (117)	4.02	4.00	12.80	12.00	8.66	8.00	----
Conestoga 5-10-10 (114)	4.83	5.00	11.00	10.00	10.53	10.00	----
LEBANON FERTILIZER WORKS Lebanon, Pa.							
Levan's 3-12-6 (229)	3.21	3.00	13.32	12.00	6.09	6.00	----
Levan's 3-12-6 (357)	4.63	4.00	13.16	12.00	7.43	6.00	----
Levan's 4-12-4 (230)	4.31	4.00	12.96	12.00	4.11	4.00	----
Levan's 4-12-8 (225)	4.18	4.00	12.42	12.00	9.35	8.00	----
Levan's 5-10-5 (224)	4.84	5.00	10.60	10.00	4.90	5.00	----
Levan's 5-10-5 (358)	5.10	5.00	11.04	10.00	4.94	5.00	----
Levan's 5-10-10 (227)	5.17	5.00	10.90	10.00	10.78	10.00	----
Levan's 10-6-4 (226)	10.01	10.00	6.32	6.00	4.17	4.00	----
FRED E. LORD, INC. Espy, Pa.							
Lord's 3-12-6 (197)	3.12	3.00	12.90	12.00	6.14	6.00	----
Lord's 4-12-8 (195)	4.01	4.00	12.34	12.00	8.50	8.00	----
Lord's 4-12-12 (196)	4.02	4.00	12.82	12.00	13.60	12.00	----
Lord's 5-10-5 (192)	4.86	5.00	11.14	10.00	4.87	5.00	----
Lord's 5-10-10 (193)	5.09	5.00	11.04	10.00	10.06	10.00	----
MILLER CHEMICAL & FERTILIZER CORP. Baltimore, Md.							
Rich Yield 3-12-6 (54)	3.12	3.00	14.36	12.00	6.44	6.00	----
Rich Yield 3-12-6 (210)	3.02	3.00	12.42	12.00	6.91	6.00	----
Rich Yield 4-12-4 (211)	3.87	4.00	12.54	12.00	4.40	4.00	----
Rich Yield 4-12-8 (56)	4.13	4.00	12.38	12.00	8.18	8.00	----
Rich Yield 5-10-10 (57)	4.86	5.00	11.28	12.00	10.09	10.00	----
Rich Yield Fruit & Tree Food 10-6-4 (55)	10.10	10.00	6.76	6.00	4.65	4.00	----
PENNSYLVANIA FARM BUREAU COOPERATIVE ASSN. Harrisburg, Pa.							
C. F. S. 3-12-6 (63)	3.23	3.00	13.40	12.00	6.45	6.00	----
C. F. S. 3-12-6 (120)	3.22	3.00	13.10	12.00	6.10	6.00	----
C. F. S. 3-12-6 (153)	3.35	3.00	12.00	12.00	6.59	6.00	----
C. F. S. 3-12-6 (285)	3.15	3.00	12.80	12.00	6.10	6.00	----
C. F. S. 3-12-6 (389)	3.28	3.00	13.18	12.00	6.35	6.00	----
C. F. S. 3-12-6 (507)	3.30	3.00	12.44	12.00	6.46	6.00	----
C. F. S. 4-12-4 (26)	4.02	4.00	12.26	12.00	4.09	4.00	----
C. F. S. 4-12-4 (152)	4.14	4.00	12.06	12.00	4.33	4.00	----
C. F. S. 4-12-4 (204)	4.08	4.00	12.58	12.00	4.51	4.00	----
C. F. S. 4-12-4 (284)	4.20	4.00	12.38	12.00	4.48	4.00	----
C. F. S. 4-12-4 (388)	4.37	4.00	12.62	12.00	4.48	4.00	----
C. F. S. 4-12-4 (506)	4.06	4.00	12.02	12.00	4.46	4.00	----
C. F. S. 4-12-8 (27)	3.98	4.00	13.26	12.00	8.22	8.00	----
C. F. S. 4-12-8 (159)	4.09	4.00	13.04	12.00	8.47	8.00	----
C. F. S. 4-12-12 (86)	4.45	4.00	12.20	12.00	13.07	12.00	----
C. F. S. 4-12-12 (98)	4.37	4.00	12.56	12.00	12.58	12.00	----
C. F. S. 4-12-12 (121)	4.27	4.00	12.54	12.00	12.96	12.00	----
C. F. S. 4-12-12 (157)	4.25	4.00	12.58	12.00	12.23	12.00	----
C. F. S. 5-10-5 (64)	4.92	5.00	10.58	10.00	5.67	5.00	----
C. F. S. 5-10-5 (84)	5.12	5.00	11.40	10.00	5.58	5.00	----
C. F. S. 5-10-5 (156)	5.12	5.00	11.02	10.00	5.27	5.00	----
C. F. S. 5-10-5 (203)	5.06	5.00	10.58	10.00	5.36	5.00	----
C. F. S. 5-10-10 (85)	5.00	5.00	10.10	10.00	10.14	10.00	----
C. F. S. 5-10-10 (158)	5.02	5.00	10.20	10.00	10.59	10.00	----
C. F. S. 5-10-10 (286)	5.04	5.00	10.68	10.00	10.27	10.00	----
C. F. S. 5-10-10 (390)	5.02	5.00	10.84	10.00	10.00	10.00	----

* Deficient

TABLE III. ANALYSES OF COMPLETE FERTILIZERS—FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	NITROGEN		AVAILABLE PHOSPHORIC ACID		POTASH		
	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
READING BONE FERTILIZER COMPANY Reading, Pa.							
Reading	3-12-6 (103)	3.65	3.00	12.02	12.00	6.66	6.00
Reading	4-12-4 (105)	4.68	4.00	*10.90	12.00	4.46	4.00
Reading	4-12-8 (106)	4.40	4.00	12.02	12.00	*7.33	8.00
Reading	5-10-5 (104)	5.45	5.00	* 9.08	10.00	5.11	5.00
Reading	5-10-10 (107)	4.90	5.00	10.00	10.00	9.86	10.00
Reading	10-6-4 (102)	*9.53	10.00	6.48	6.00	4.23	4.00
ROBERT A. REICHARD, INC. Allentown, Pa.							
Animal Base	3-12-6 (82)	2.92	3.00	12.04	12.00	6.38	6.00
Animal Base	3-12-6 (393)	3.12	3.00	13.08	12.00	6.22	6.00
Animal Base	4-12-4 (80)	3.85	4.00	12.50	12.00	4.78	4.00
Animal Base	4-12-8 (81)	3.80	4.00	12.52	12.00	8.17	8.00
Animal Base	4-12-8 (183)	3.84	4.00	12.44	12.00	8.10	8.00
Animal Base	4-12-8 (269)	3.81	4.00	12.52	12.00	8.14	8.00
Animal Base	5-10-5 (78)	4.92	5.00	10.14	10.00	5.30	5.00
Animal Base	5-10-5 (397)	5.07	5.00	10.39	10.00	5.60	5.00
Animal Base	5-10-10 (79)	4.81	5.00	10.54	10.00	10.35	10.00
Animal Base	5-10-10 (185)	4.84	5.00	10.10	10.00	9.90	10.00
Animal Base	5-10-10 (270)	5.02	5.00	10.28	10.00	10.61	10.00
Animal Base	5-10-10 (392)	5.14	5.00	9.83	10.00	10.51	10.00
Animal Base	10-6-4 (83)	10.22	10.00	6.48	6.00	3.88	4.00
Animal Base	10-6-4 (184)	10.02	10.00	7.00	6.00	3.87	4.00
F. S. ROYSTER GUANO COMPANY Baltimore, Md.							
Royster Guano	3-12-6 (14)	3.63	3.00	12.30	12.00	6.97	6.00
Royster Guano	3-12-6 (146)	3.15	3.00	12.12	12.00	6.16	6.00
Royster Guano	3-12-6 (251)	3.16	3.00	12.42	12.00	6.10	6.00
Royster Guano	3-12-6 (314)	3.01	3.00	12.98	12.00	*5.64	6.00
Royster Guano	3-12-6 (435)	3.05	3.00	12.58	12.00	6.62	6.00
Royster Guano	3-12-6 (504)	3.06	3.00	12.74	12.00	6.13	6.00
Royster Guano	4-12-4 (17)	4.14	5.00	12.52	12.00	4.85	4.00
Royster Guano	4-12-4 (254)	4.11	4.00	12.78	12.00	4.41	4.00
Royster Guano	4-12-8 (16)	4.27	4.00	12.20	12.00	8.49	8.00
Royster Guano	4-8-12 (342)	4.25	4.00	9.18	8.00	11.88	12.00
Royster Guano	5-10-5 (147)	5.07	5.00	10.04	10.00	5.08	5.00
Royster Guano	5-10-5 (187)	4.81	5.00	10.90	10.00	5.08	5.00
Royster Guano	5-10-5 (252)	4.81	5.00	10.98	10.00	5.28	5.00
Royster Guano	5-10-5 (315)	5.02	5.00	10.74	10.00	5.50	5.00
Royster Guano	5-10-5 (341)	4.87	5.00	10.54	10.00	5.45	5.00
Royster Guano	5-10-5 (436)	4.87	5.00	10.24	10.00	5.17	5.00
Royster Guano	5-10-10 (186)	5.09	5.00	10.24	10.00	10.71	10.00
Royster Guano	5-10-10 (340)	5.17	5.00	10.68	10.00	10.50	10.00
SEARS, ROEBUCK COMPANY Chicago, Ill.							
Garden Master Plant Food	5-10-5 (472)	5.09	5.00	11.00	10.00	5.06	5.00
CHAS. H. SEIBERT Myerstown, Pa.							
Successful Crop Grower	3-12-6 (233)	2.88	3.00	13.32	12.00	6.01	6.00
Successful Crop Grower	3-9-12 (234)	2.86	3.00	10.36	9.00	12.76	12.00
Successful Crop Grower	4-12-8 (235)	3.81	4.00	12.96	12.00	8.66	8.00
Successful Crop Grower	5-10-10 (236)	4.83	5.00	11.00	10.00	9.85	10.00
STANDARD WHOLESALE PHOSPHATE & ACID WORKS, INC. Baltimore, Md.							
Standard	3-12-6 (406)	3.13	3.00	14.10	12.00	*5.60	6.00
SWACK FERTILIZER COMPANY DuBois, Pa.							
Swack's	3-12-6 (39)	3.04	3.00	12.68	12.00	5.90	6.00
Swack's	3-12-6 (237)	3.21	3.00	13.30	12.00	6.15	6.00
Swack's	3-12-6 (297)	3.24	3.00	12.76	12.00	6.65	6.00
Swack's	4-12-8 (295)	4.33	4.00	12.76	12.00	8.88	8.00
Swack's	5-10-5 (296)	5.19	5.00	10.38	10.00	5.72	5.00
Swack's	5-10-10 (299)	5.34	5.00	10.32	10.00	10.91	10.00
Swack's	10-6-4 (298)	10.27	10.00	6.60	6.00	4.24	4.00
SWIFT & COMPANY PLANT FOOD DIVISION Baltimore, Md.							
Blenn	3-12-6 (291)	3.13	3.00	11.80	12.00	6.21	6.00
Blenn	3-12-6 (363)	3.37	3.00	12.58	12.00	6.14	6.00
Blenn	3-12-6 (375)	3.38	3.00	12.50	12.00	6.03	6.00
Brimm	5-10-10 (362)	5.05	5.00	10.50	10.00	10.08	10.00
Brimm	5-10-10 (377)	5.02	5.00	10.52	10.00	*9.52	10.00
Red Steer	3-12-6 (31)	2.91	3.00	12.68	12.00	6.55	6.00
Red Steer	3-12-6 (122)	3.19	3.00	12.06	12.00	6.46	6.00
Red Steer	3-12-6 (374)	3.01	3.00	12.20	12.00	6.19	6.00
Red Steer	4-12-8 (32)	3.93	3.00	12.84	12.00	8.15	8.00
Red Steer	5-10-5 (125)	5.04	5.00	10.34	10.00	5.84	5.00
Red Steer	5-10-5 (292)	5.03	5.00	10.28	10.00	5.85	5.00

* Deficient

TABLE III. ANALYSES OF COMPLETE FERTILIZERS—FURNISHING NITROGEN, PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	NITROGEN		AVAILABLE PHOSPHORIC ACID		POTASH		
	Found	Guar.	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
Red Steer 5-10-10 (123)	5.28	5.00	10.02	10.00	9.91	10.00	---
Red Steer 5-10-10 (294)	5.01	5.00	10.34	10.00	10.18	10.00	---
Vigoro 4-12-4 (316)	4.14	4.00	12.74	12.00	4.23	4.00	---
Vigoro 4-12-4 (473)	4.24	4.00	12.62	12.00	4.24	4.00	---
Vigoro 4-12-4 (515)	4.25	4.00	11.88	12.00	4.24	4.00	---
I. P. THOMAS & SON COMPANY Camden, N. J.							
Tip Top 3-12-6 (134)	3.20	3.00	12.66	12.00	5.91	6.00	---
Tip Top 3-12-6 (351)	3.27	3.00	12.96	12.00	5.87	6.00	---
Tip Top 3-12-6 (415)	3.23	3.00	12.98	12.00	5.91	6.00	---
I. P. Thomas 5-10-5 (207)	4.83	5.00	11.44	10.00	5.33	5.00	---
I. P. Thomas 5-10-5 (352)	5.20	5.00	11.02	10.00	5.20	5.00	---
I. P. Thomas 5-10-5 (413)	5.01	5.00	10.38	10.00	4.90	5.00	---
I. P. Thomas 5-10-10 (133)	4.81	5.00	11.16	10.00	*9.11	10.00	---
TRENTON BONE FERTILIZER CO. Trenton, N. J.							
Trenton 3-12-6 (150)	3.28	3.00	12.00	12.00	6.25	6.00	---
Trenton 5-10-5 (149)	5.18	5.00	10.28	10.00	4.91	5.00	---
F. W. TUNNELL & COMPANY, INC. Philadelphia, Pa.							
Tunnell's 3-12-6 (47)	3.13	3.00	13.68	12.00	6.47	6.00	---
Tunnell's 3-12-6 (128)	3.31	3.00	12.56	12.00	6.31	6.00	---
Tunnell's 4-12-4 (446)	3.82	4.00	12.44	12.00	5.43	4.00	---
Tunnell's 5-10-5 (127)	5.02	5.00	10.92	10.00	5.06	5.00	---
Tunnell's 5-10-5 (447)	5.14	5.00	10.42	10.00	5.35	5.00	---
Tunnell's 5-10-10 (394)	5.46	5.00	10.00	10.00	10.72	10.00	---
UNIVERSAL CHEMICAL COMPANY Lynn, Mass.							
Electra Plant Food 5-10-3 (482)	5.64	5.00	10.40	10.00	3.04	3.00	---
VIRGINIA-CAROLINA CHEMICAL CORP. Baltimore, Md.							
V-C Fertilizer 3-12-6 (140)	3.10	3.00	12.12	12.00	6.36	6.00	---
V-C Fertilizer 3-12-6 (247)	3.13	3.00	12.16	12.00	6.84	6.00	---
V-C Fertilizer 3-12-6 (283)	3.02	3.00	12.36	12.00	6.69	6.00	---
V-C Fertilizer 4-12-4 (144)	4.04	4.00	12.10	12.00	4.05	4.00	---
V-C Fertilizer 4-12-4 (249)	4.11	4.00	12.02	12.00	4.28	4.00	---
V-C Fertilizer 4-12-8 (141)	4.01	4.00	12.36	12.00	7.97	8.00	---
V-C Fertilizer 4-12-8 (250)	4.14	4.00	12.20	12.00	9.25	8.00	---
V-C Fertilizer 4-12-8 (282)	4.06	4.00	12.32	12.00	8.45	8.00	---
V-C Fertilizer 5-10-5 (142)	4.92	5.00	10.36	10.00	5.10	5.00	---
V-C Fertilizer 5-10-10 (143)	5.13	5.00	11.02	10.00	10.32	10.00	---
V-C Fertilizer 5-10-10 (216)	5.28	5.00	10.04	10.00	11.55	10.00	---
V-C Fertilizer 10-6-4 (199)	9.86	10.00	6.88	6.00	4.13	4.00	---
YORK STONE & SUPPLY COMPANY York, Pa.							
Cramer's York 3-12-6 (190)	3.32	3.00	12.92	12.00	6.14	6.00	---
Cramer's York 3-12-6 (220)	3.01	3.00	12.92	12.00	6.40	6.00	---
Cramer's York 4-12-8 (189)	4.36	4.00	12.64	12.00	7.90	8.00	---
Cramer's York 4-12-8 (219)	4.41	4.00	12.16	12.00	8.55	8.00	---

* Deficient

TABLE V. SUPERPHOSPHATE AND LIME PHOSPHATE FERTILIZERS—FURNISHING PHOSPHORIC ACID

MANUFACTURER AND BRAND NAME	PHOSPHORIC ACID					
	Total		Available		Insoluble	
	Found	Guar.	Found	Guar.	Found	Guar.
P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
THE AMERICAN AGRICULTURAL CHEMICAL CO. New York, N. Y.						
18% Normal Superphosphate (9) 18% Normal Superphosphate (165) 18% Normal Superphosphate (264) 18% Normal Superphosphate (302) 18% Normal Superphosphate (404) 18% Normal Superphosphate (431) 18% Normal Superphosphate (462) 18% Normal Superphosphate (513)			18.98 18.06 19.28 20.46 20.22 19.86 19.20 19.38	18.00 18.00 18.00 18.00 18.00 18.00 18.00 18.00		
ARMOUR FERTILIZER WORKS Baltimore, Md.						
Armour's Big Crop Superphosphate 20% (475) Armour's Big Crop Superphosphate 20% (46) Armour's Big Crop Superphosphate 20% (245) Armour's Big Crop Superphosphate 20% (346) Armour's Big Crop Superphosphate 20% (424)			21.50 19.90 20.92 21.02 21.32	20.00 20.00 20.00 20.00 20.00		
BAUGH & SONS COMPANY Philadelphia, Pa.						
Baugh's Granular Superphosphate 20% (60) Baugh's Superphosphate 20% (72) Baugh's Superphosphate 20% (338) Beugh's Superphosphate 20% (422) Baugh's Superphosphate 20% (443)			20.72 20.42 21.54 21.92 20.20	20.00 20.00 20.00 20.00 20.00		
CARLISLE FERTILIZER WORKS, INC. Carlisle, Pa.						
Carlisle Superphosphate 20% (214)			21.32	20.00		
CENTRAL CHEMICAL CORPORATION Hagerstown, Md.						
Farmrite Famous Farmphos 20% (52) Farmrite Famous Farmphos 20% (77) Farmrite Superphosphate 20% (21) Farmrite Superphosphate 20% (175)			19.80 20.16 20.54 20.56	20.00 20.00 20.00 20.00		
COOPERATIVE G.L.F. SOIL BUILDING SERVICE INCORPORATED Ithaca, N. Y.						
G.L.F. Quality Gran-Phosphate 20% (373) G.L.F. Quality Superphosphate 20% (320)			21.68 20.84	20.00 20.00		
THE DAVISON CHEMICAL CORPORATION Baltimore Md.						
Davison's Superphosphate 20% (268) Devion's Superphosphate 20% (502) Devco Granulated Superphosphate 20% (273) Devco Granulated Superphosphate 20% (310) Devco Granulated Superphosphate 20% (465) Devco Granulated Superphosphate 20% (474) Devco Granulated Superphosphate 20% (495)			21.24 20.66 21.38 20.78 20.66 21.70 21.08	20.00 20.00 20.00 20.00 20.00 20.00 20.00		
AMOS EBY & COMPANY Paradise, Pa.						
Eby's Superphosphate 20% (110)			20.68	20.00		
EASTERN STATES FARMERS' EXCHANGE, INC. West Springfield, Mass.						
Eastern States Granular Superphosphate 20% (169) Eastern States Pulverized Superphosphate 20% (239)			20.42 21.66	20.00 20.00		
LANCASTER BONE FERTILIZER COMPANY, INC. Quarryville, Pa.						
Comestoge Superphosphate 18% (116)			19.06	18.00		

TABLE V. SUPERPHOSPHATE AND LIME PHOSPHATE FERTILIZERS—FURNISHING PHOSPHORIC ACID

MANUFACTURER AND BRAND NAME	PHOSPHORIC ACID					
	Total		Available		Insoluble	
	Found	Guar.	Found	Guar.	Found	Guar.
LEBANON FERTILIZER WORKS Lebanon, Pa.						
Levan's Suprophosphate 20% (228)			22.18	20.00		
FRED E. LORD, INC. Espy, Pa.						
Lord's Suprophosphate 20% (191)			20.68	20.00		
PENNSYLVANIA FARM BUREAU COOPERATIVE ASSN. Harrisburg, Pa.						
C. F. S. Suprophosphate 20% (62)			20.96	20.00		
C. F. S. Suprophosphate 20% (151)			20.02	20.00		
C. F. S. Suprophosphate 20% (217)			20.24	20.00		
C. F. S. Suprophosphate 20% (505)			21.18	20.00		
C. F. S. Superphosphate Granulated 20% (100)			20.52	20.00		
F. S. ROYSTER GUANO COMPANY Baltimore, Md.						
Royster Superphosphate 20% (15)			20.40	20.00		
Royster Superphosphate 20% (434)			21.92	20.00		
STANDARD WHOLESALE PHOSPHATE & ACID WORKS, INC. Baltimore, Md.						
Standard Suprophosphate 20% (405)			21.30	20.00		
SWACK FERTILIZER COMPANY DuBois, Pa.						
Swack's Suprophosphate 20% (40)			21.30	20.00		
SWIFT & COMPANY PLANT FOOD DIVISION Baltimore, Md.						
Swift's Red Stear Suprophosphate 20% (34)			21.66	20.00		
Swift's Red Stear Suprophosphate 20% (126)			20.44	20.00		
Swift's Red Stear Suprophosphate 20% (293)			20.30	20.00		
Swift's Red Stear Suprophosphate 20% (378)			22.16	20.00		
I. P. THOMAS & SON COMPANY Camden, N. J.						
I. P. Thomas Suprophosphate 20% (353)			21.62	20.00		
I. P. Thomas Suprophosphate 20% (396)			20.16	20.00		
I. P. Thomas Suprophosphate 20% (414)			20.12	20.00		
VIRGINIA-CAROLINA CHEMICAL CORP. Baltimore, Md.						
V. C. Suprophosphate 20% (248)			21.52	20.00		

TABLE VI. ROCK AND POTASH FERTILIZERS—FURNISHING PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	AVAILABLE PHOSPHORIC ACID			POTASH		
	Found	Guar.	P. ct.	Found	Guar.	As Muricate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
THE AMERICAN AGRICULTURAL CHEMICAL CO. New York, N. Y.						
AA Quality Agrico Phosphate & Potash 0-14-7 (408) 0-14-7 (12)	15.26 14.82	14.00 14.00	7.51 7.26	7.00 7.00	7.00 7.00	----
ARMOUR FERTILIZER WORKS Baltimore, Md.						
Armour's Big Crop 0-12-12 (4) Armour's Big Crop 0-14-7 (6) Armour's Big Crop 0-14-7 (200) Armour's Big Crop 0-14-7 (426)	12.72 14.78 14.58 15.02	12.00 14.00 14.00 14.00	12.33 7.91 7.36 7.37	12.00 7.00 7.00 7.00	12.00 7.00 7.00 7.00	----
CENTRAL CHEMICAL CORPORATION Hagerstown, Md.						
Farmrite Potash Special 0-14-7 (20) Farmrite Potash Special 0-14-7 (179) Farmrite Potash Special 0-14-7 (325) Farmrite Potash Special 0-14-7 (500)	14.42 14.30 14.38 14.56	14.00 14.00 14.00 14.00	7.24 7.18 7.43 6.98	7.00 7.00 7.00 7.00	7.00 7.00 7.00 7.00	----
BAUGH & SONS COMPANY Philadelphia, Pa.						
Beugh's Phosphate & Potash Mixtura 0-14-7 (58)	15.28	14.00	7.10	7.00	7.00	----
COOPERATIVE G.L.F. SOIL BUILDING SERVICE, INC. Ithaca, New York						
G. L. F. Quality 0-20-20 (412)	20.94	20.00	21.82	20.00	20.00	----
THE DAVISON CHEMICAL CORPORATION Baltimore, Md.						
Davco Granulated 0-14-7 (277)	14.22	14.00	7.93	7.00	7.00	----
EASTERN STATES FARMERS' EXCHANGE, INC. West Springfield, Mass.						
Eastern States 0-20-20 (171)	20.08	20.00	20.72	20.00	20.00	----
AMOS EBY & COMPANY Paradise, Pa.						
Eby's 0-14-7 (112)	14.50	14.00	7.62	7.00	7.00	----
GRIFFITH & BOYD COMPANY Baltimore, Md.						
Griffith & Boyd's 0-20-20 (509)	20.82	20.00	19.80	20.00	20.00	----
LANCASTER BONE FERTILIZER COMPANY, INC. Quarryville, Pa.						
Conestoga 0-14-7 (119) 0-14-7 (368)	14.98 15.22	14.00 14.00	7.28 7.02	7.00 7.00	7.00 7.00	----
LEBANON FERTILIZER WORKS Lebanon, Pa.						
Levan's 0-12-12 (232) 0-14-7 (231)	12.94 15.38	12.00 14.00	13.12 7.35	12.00 7.00	12.00 7.00	----
FRED E. LORD, INC. Espy, Pa.						
Lord's 0-14-7 (194)	14.06	14.00	7.93	7.00	7.00	----
PENNSYLVANIA FARM BUREAU COOPERATIVE ASSN. INCORPORATED Harrisburg, Pa.						
C. F. S. 0-14-7 (29) C. F. S. 0-14-7 (61) C. F. S. 0-14-7 (99) C. F. S. 0-14-7 (154) C. F. S. 0-14-7 (287) C. F. S. Super Alfalfa 0-12-12 (28)	15.22 15.50 14.74 14.62 14.78 13.10	14.00 14.00 14.00 14.00 14.00 12.00	7.84 7.36 7.40 7.79 7.67 12.31	7.00 7.00 7.00 7.00 7.00 12.00	7.00 7.00 7.00 7.00 7.00 7.00	----
F. S. ROYSTER GUANO COMPANY Baltimore, Md.						
Royster Phosphate & Potash 0-14-7 (18)	14.24	14.00	7.38	7.00	7.00	----
SWACK FERTILIZER COMPANY DuBois, Pa.						
Swack's 0-14-7 (41) 0-14-7 (300)	15.68 14.98	14.00 14.00	7.19 7.87	7.00 7.00	7.00 7.00	----

* Deficient

TABLE VI. ROCK AND POTASH FERTILIZERS—FURNISHING PHOSPHORIC ACID AND POTASH

MANUFACTURER AND BRAND NAME	AVAILABLE PHOSPHORIC ACID		POTASH		
	Found	Guar.	Found	Guar.	As Muriate
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
SWIFT & COMPANY PLANT FOOD DIVISION Baltimore, Md.					
Swift's Red Steer 0-1 $\frac{1}{2}$ -7 (33)	13.82	14.00	6.87	7.00	----
Swift's Red Steer 0-1 $\frac{1}{2}$ -7 (124)	14.04	14.00	7.61	7.00	----
Swift's Red Steer 0-1 $\frac{1}{2}$ -7 (376)	15.30	14.00	7.62	7.00	----
F. W. TUNNELL & COMPANY Philadelphia, Pa.					
Tunnell's 0-1 $\frac{1}{2}$ -7 (395)	15.56	14.00	7.08	7.00	----
VIRGINIA-CAROLINA CHEMICAL CORP. Baltimore, Md.					
V-C Fertilizer 0-1 $\frac{1}{2}$ -7 (145)	14.62	14.00	7.75	7.00	----
YORK STONE & SUPPLY CO. York, Pa.					
Cramer's York 0-1 $\frac{1}{2}$ -7 (221)	14.60	14.00	8.62	7.00	----

TABLE VII. MISCELLANEOUS FERTILIZERS

	NITROGEN		PHOSPHORIC ACID			
	Found P. ct.	Guar. P. ct.	Total		Available	
			Found P. ct.	Guar. P. ct.	Found P. ct.	Guar. P. ct.
AMERICAN CYANAMID COMPANY New York, N. Y.						
20.6% Aree Cyanamid, Granular 20.6% Aree Cyanamid, Granular	(321)	20.63	20.00			
	(460)	20.62	20.00			
CHILEAN NITRATE SALES CORP. New York, N. Y.						
Chilean Nitrate of Soda Champion Brand	(469)	16.22	16.00			
Chilean Nitrate of Soda Champion Brand	(517)	16.02	16.00			
EASTERN STATES FARMERS' EXCHANGE INCORPORATED West Springfield, Mass.						
Eastern States	(238)	*9.38	10.00		19.92	20.00
THE SEWERAGE COMMISSION Milwaukee, Wisconsin						
Milorganite Milorganite	{470}	6.00	6.00		2.30	2.00
	{477}	6.03	6.00		2.48	2.00

* Deficient

